Biochemistry

INTERACTION OF AMPHIPHATIC CYCLIC PEPTIDE WITH LIPID MEMBRANES

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Octa1-Tryptophan is an amphipathic cyclic peptide. Cyclic peptides are versatile molecules that have been found to have a variety of functions such as protein binding inhibitors, ion-transport regulators, immunosuppressant and antibiotics. We investigated the lytic properties of Octa1-Tryptophan, as well its ability to interact with neutral phosphatidyl choline lipid vesicles and negatively charged phosphatidyl choline/phosphatidyl glycerol lipid vesicles. These interactions of Octa1-Tryptophan were characterized by fluorescence spectroscopy. Using tryptophan as a fluorescent probe, changes in the fluorescence spectra were used to monitor the behavior of the peptide. Here we report that Octa1-Tryptophan does indeed interact with lipid membranes; by contrast, the peptide interacts more with negatively charged membranes as compared to neutral membranes. The lytic properties of Octa1-Tryptophan are inconclusive pending further experiment.